CLAIMS

1. Method for dynamic allocation of transmission resources to a plurality of
communications between a base station and a plurality of mobile terminals, each
resource consisting of a plurality of possible values, an allocation controller
5 associated with the base station, referred to as the fast allocation controller, being
able to allocate to the said communications only certain combinations of possible
values, referred to as available resources, characterised in that the said fast
allocation controller generates a pseudo-random sequence and allocates at least one
available resource to a communication according to a value of the said pseudo-
10 random sequence.

2. Dynamic resource allocation method according to Claim 1, characterised
in that the said available resources are indexed sequentially and in that a
combination of available resources is allocated if its index is equal to a value of the
15 said pseudo-random sequence.

3. Dynamic resource allocation method according to Claim 1 or 2,
characterised in that parameters for generating the said random sequence are
transmitted from the base station to the mobile terminals and in that the said random
20 sequence is generated by the mobile terminals from the said generation parameters.

4. Dynamic resource allocation method according to one of the preceding
claims, characterised in that, the transmission resources of a plurality of adjacent
base stations being controlled by a slow allocation controller, the resources
25 available for each base station are determined regularly, at a first frequency, by the
said slow allocation controller and transmitted by the latter to the fast allocation
controllers associated with the said base stations.

5. Dynamic allocation method according to Claim 4, characterised in that an
30 item of information supplying the resources available at a base station is transmitted
by the latter to the mobile terminals which it serves.

6.   Dynamic resource allocation method according to Claim 4 or 5, characterised in that each fast allocation controller allocates the resources available at the base station with which it is associated at a second frequency substantially higher than the said first frequency.

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7.   Dynamic allocation method according to one of the preceding claims, characterised in that the resources comprise transmission time slots, spectral spreading codes intended to separate the different communications and/or transmission frequencies.

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8.   Dynamic allocation method according to one of the preceding claims, characterised in that the random sequence is calculated by:

$X(1)=x_0$

$X(i+1)=\mod((a.X(i)+b-1,2^N)+1$

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where x_0 is a word of N bits constituting the seed of the sequence, $a-1$ is a non-zero integer which is a multiple of 4 and b is an odd number,

and where N is an integer such that 2^N is greater than the maximum number of available resources.

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9. Dynamic allocation method according to Claim 7 or 8, characterised in that, the base station and the mobile terminals belonging to a UTRA-TDD mobile telecommunication system, a first subset of available resources is dedicated to the uplink communications and a second subset of available resources is dedicated to the

25   downlink communications, and in that the allocation of the available resources of the first subset to the uplink communications is effected independently of the allocation of the available resources of the second subset to the downlink communications.

10. Dynamic allocation method according to Claims 3 and 9, characterised in

30   that the random sequence generation parameters are transmitted over the common control channel BCH.